

INTERPRETATION CENTER

BASIC IMAGERY INTERPRETATION REPORT

MOSCOW EXPLOSIVES PROPELLANTS RESEARCH AND DEVELOPMENT FACILITY LYUBERTSY

25X1

STRATEGIC WEAPONS INDUSTRIAL FACILITIES
USSR

25X1

DECLASS REVIEW by NIMA/DOD

25X1

TOP SECRET 25X1

RCA-09/0009/71 COPY NO 1110 7 PAGES

GROUP 1: EXCLUDED FROM AUTOMATIC DOWNGRADING

AND Approved For Release 2005/06/08: CIA-RDP78T04563A000800010010-8,0545

INSTALLATION OR ACTIVITY						COUNTRY
Moscow Explo	osives Propellan	nts Research and	d Developi	nent Facilit	y Lyubertsy	UR
TM COORDINATES	GEOGRAPHIC COORDIN			BE NUMBER	None	NIETB NO.
AP REFERENCE	55-37-30IN U	091-90-90E		<u> </u>	INOILE	
JS Air Target	Chart, Series 2	200, Sheet 0167-	-5, scale 1:	200,000 (SE	CRET)	
ATEST IMAGERY USED			NEGATION DA			
			NA			
		AB:	STRACT			
1. Mosc	ow Explosives	Propellants R	lesearch a	nd Develop	ment Facility	y Lyubert
consists of tw	o major areas:	an engineering	and labor	atory area a	nd a possible	double-ba
production as	rea. The latter	area has the co	apability t intains 45	o produce a maior struc	tures.	small rock
motors. The	plant covers o	oo deres did ee]		
2. The	major researc	ch effort at M	oscow Ex	J plosives Pr	opellants R	&D Facili
Lyubertsy is	probably in th	he rocket motor	field. Th	is contentio	n is substant	iated by th
completion in	1 1964 of structi	ures which poss ximity and clos	ably house se function	double-bas al relation:	e rocket moto ship between	r production the subie
facility and I	Moscow Solid	Motor Producti	ion Plant	Lyubertsy [(Mosco
Solid Propella	ant R & D Facil	lity Lyubertsy).		_		
3. Mosc	ow Explosives	Propellants R	&D Facil	ity Lyubert	sy may be t	he home
		te 125, which	has been	reported by	7	to be in the
Lyubertsy are		ed on photogra	nhy from			1
contains a p	hotograph, a l	line drawing, a	pny nom	l description	n and discus	ssion of the
			ina textua			351011 01 01
facility.		<u>.</u>	ind textua	•		ssion of the
facility.			DUCTION			
5. Mosco	ow Explosives	INTRO Propellants Re	DUCTION	N d Developm	ent Facility	Lyubertsy
5. Mosco situated on u	neven terrain n	INTRO	DDUCTION esearch and nk of the I	N d Developm	ent Facility	Lyubertsy
5. Mosco situated on u southeast of t 6. Photo	neven terrain n the center of Mo ographic evider	INTRO Propellants Re near the east ba oscow (Figure 1) nce suggests the	esearch and nk of the I	N d Developm Moscow Riv	ent Facility i er, 11 nautica	Lyubertsy l miles (m
5. Mosc situated on u southeast of t 6. Photo and possibly	neven terrain notes the center of Mo ographic evider explosives res	INTRO Propellants Re near the east ba oscow (Figure 1) nce suggests the search and dev	esearch and nk of the I	N d Developm Moscow Riv d bureau in is located	ent Facility i er, 11 nautica volved in soli here. Scienti	Lyubertsy l miles (ni d propella fic Resear
5. Mosco situated on usoutheast of to 6. Photo and possibly Institute 125,	neven terrain not he center of Moo ographic evider explosives res probably enga	INTRO Propellants Re near the east ba oscow (Figure 1) nce suggests the	esearch and nk of the I	N d Developm Moscow Riv d bureau in is located	ent Facility i er, 11 nautica volved in soli here. Scienti	Lyubertsy l miles (ni d propella fic Resear
5. Mosco situated on us southeast of t 6. Photo and possibly Institute 125, Lyubertsy are	neven terrain not he center of Moographic evider explosives resupobably engages. 1	INTRO Propellants Renear the east bacoscow (Figure 1) nce suggests the search and developed in propellant	esearch and nk of the I at a design relopment and exp	d Developm Moscow Riv a bureau inv is located losives R&I	ent Facility i er, 11 nautica volved in soli here. Scienti), has been rej	Lyubertsy l miles (ni d propella fic Resear ported in t
5. Mosco situated on us southeast of t 6. Photo and possibly Institute 125, Lyubertsy are 7. Mosco	neven terrain not he center of Motographic evider explosives resuprobably engages. 1 ow Explosives 1	INTRO Propellants Re near the east ba oscow (Figure 1) nce suggests the search and dev	esearch and nk of the I of the	d Developm Moscow Riv bureau invis located losives R&I	nent Facility i er, 11 nautica volved in soli here. Scienti D, has been rej is the only kr	Lyubertsy l miles (ni d propella fic Resear ported in t
5. Mosco situated on us southeast of t 6. Photo and possibly Institute 125, Lyubertsy are 7. Mosco in the Mosco likely that the	neven terrain not he center of Moreographic evider explosives resupposably engages. I have been explosives by area with a perfacility supposes the content of the content o	INTRO Propellants Renear the east bases (Figure 1) nce suggests the search and developed in propellants R& an apparent capplies nitroglyce	esearch and nk of the I of I o	d Developm Moscow Riv a bureau in is located losives R&I Lyubertsy producing	nent Facility in the solid property of the s	Lyubertsy l miles (ni d propella fic Resear ported in t nown facili e. It is ve
5. Mosci situated on us southeast of t 6. Photo and possibly Institute 125, Lyubertsy are 7. Mosco in the Mosco likely that th Lyubertsy, ^{2,3}	neven terrain not he center of Motographic evider explosives responded to the probably engages. It was a sea with a me facility suppose the probably suppose the probably engages. It was a sea with a me facility suppose the probably which is 2 nm	INTRO Propellants Renear the east bases (Figure 1) Ince suggests the search and developed in propellants R& In apparent capalies nitroglyces to the southeas	esearch and nk of the I at a designed and experiment and experiment of the I by Facility of the I continuous control of the I control	d Developm Moscow Riv bureau intis located losives R&I Lyubertsy producing scow Solid	nent Facility in er, 11 nautical volved in solithere. Scientiff, has been rejust the only knitroglycering Propellant R	Lyubertsy l miles (m d propella fic Resear ported in t nown facili e. It is ve &D Facili
5. Mosco situated on us southeast of t 6. Photo and possibly Institute 125, Lyubertsy are 7. Mosco in the Mosco likely that th Lyubertsy, 2,3 8. Mosco	neven terrain not he center of Motographic evider explosives responded as a constant of the constant of the facility supposes of the constant	INTRO Propellants Renear the east bases oscow (Figure 1) Ince suggests the search and developed in propellants R& an apparent capplies nitroglyces to the southeas ellant R&D Face	esearch and nk of the I of I of the I of I of the I of I o	d Developm Moscow Riv bureau invis located losives R&I Lyubertsy producing scow Solid	nent Facility in er, 11 nautical volved in solichere. Scientiff, has been reposite the only known itroglycerin Propellant Revelopment ar	Lyubertsy l miles (magnetic Resear corted in the community of the communit
situated on usoutheast of t 6. Photo and possibly Institute 125, Lyubertsy are 7. Mosco in the Mosco likely that th Lyubertsy, 2,3 8. Mosco production of	neven terrain not he center of Motographic evider explosives responding ea. 1 ow Explosives low area with a ne facility suppose which is 2 nm ow Solid Proper focket motor	INTRO Propellants Renear the east bases (Figure 1) Ince suggests the search and developed in propellants R& In apparent capalies nitroglyces to the southeas	esearch and nk of the I of I of the I of I of the I of I o	d Developm Moscow Riv bureau invis located losives R&I Lyubertsy producing scow Solid gaged in de	nent Facility in er, 11 nautical volved in solic here. Scientiff, has been replies the only known itroglycerin Propellant Revelopment ar in this plant	Lyubertsy l miles (m d propella fic Resear ported in t nown facili e. It is ve &D Facili ad prototy
5. Mosco situated on us southeast of the southeast of the first and possibly Institute 125, Lyubertsy are found in the Mosco likely that the Lyubertsy, 2,3 for a mosco production of the engineering of Lyubertsy, which is the south of the first and the south of the	neven terrain not he center of Motographic evider explosives responding to the probably engages. I will be a supposed on the probably engages and the facility supposed which is 2 nm ow Solid Proper frocket motor research. This with an abundant	Propellants Renear the east bases oscow (Figure 1) ince suggests the search and developed in propellants R& an apparent capplies nitroglyces to the southeas ellant R&D Faces. However, the suggests that ance of engineer	esearch and ink of the I of th	d Developm Moscow Riv bureau invis located losives R&I Lyubertsy producing scow Solid gaged in de buildings explosives I provides the	nent Facility in er, 11 nautical volved in solichere. Scientia is the only known in the only known in the plant Repropellant Repropellants Reproperties Reproperties Reproperties Repropellants Reprop	Lyubertsy I miles (miles (miles (miles are corted in the corted are corted a
5. Mosco situated on us southeast of t 6. Photo and possibly Institute 125, Lyubertsy are 7. Mosco in the Mosco likely that th Lyubertsy, 2,3 8. Mosco production of engineering r Lyubertsy, we required by the south of the sout	neven terrain not he center of Moreover explosives responded by engages. I have a with a net facility supposed by the facility supposed for the facility supposed for the facility research. This with an abundant he Solid Property of the facility of the facility for the facility	Propellants Renear the east bases oscow (Figure 1) ince suggests the search and deviged in propellant Propellants R& an apparent capplies nitroglyces to the southeas ellant R&D Facts. However, the suggests that nice of engineer pellant R&D facts.	esearch and ink of the I of th	d Developm Moscow Riv bureau invis located losives R&I Lyubertsy producing scow Solid gaged in de buildings explosives I provides the	nent Facility in er, 11 nautical volved in solichere. Scientia is the only known in the only known in the plant Repropellant Repropellants Reproperties Reproperties Reproperties Repropellants Reprop	Lyubertsy I miles (miles (miles (miles are corted in the corted are corted a
5. Mosco situated on us southeast of t 6. Photo and possibly Institute 125, Lyubertsy are 7. Mosco in the Mosco likely that th Lyubertsy, 2,3 8. Mosco production of engineering r Lyubertsy, we required by facilities may	neven terrain in the center of Moraphic evider explosives resprobably engages. I was explosives by area with a facility suppose of rocket motor research. This ith an abundant be completely	Propellants Renear the east bases (Figure 1) ince suggests the search and developed in propellants R& an apparent capplies nitroglyces to the southeas ellant R&D Facts. However, the suggests that note of engineer pellant R&D facintegrated.	esearch and nk of the I h. at a design relopment and expect D Facility pability of rine to Motat. Edity is entere are no Moscow Eding space, accility. Alto	d Developm Moscow Riv bureau invis located losives R&I Lyubertsy producing scow Solid gaged in de buildings explosives F provides the	nent Facility in er, 11 nautical volved in solic here. Scientiff, has been reposite the only known introglycering Propellant Reposition of the plant in this plant is engineering sically separated.	Lyubertsy l miles (nr d propella fic Resear foorted in the control of the control
5. Mosco situated on use southeast of the southeast of the second possibly institute 125, Lyubertsy are second in the Mosco likely that the Lyubertsy, 2,3 s. Mosco production of the engineering round the second production of the second production	neven terrain not he center of Motographic evider explosives resprobably engages. I was a rea with a ne facility suppose which is 2 nm ow Solid Propef rocket motor research. This ith an abundant he Solid Propef be completely Moscow area ha	Propellants Renear the east bases oscow (Figure 1) ince suggests the search and deviged in propellant Propellants R& an apparent capplies nitroglyces to the southeas ellant R&D Facts. However, the suggests that nice of engineer pellant R&D facts.	esearch and nk of the I h. at a design relopment and expect D Facility pability of rine to Mort. Edity is entere are no Moscow Eding space, acility. Alternetration	d Developm Moscow Riv bureau invis located losives R&I Lyubertsy producing scow Solid gaged in de buildings explosives I provides the	nent Facility in er, 11 nautical volved in solid here. Scientiff, has been reposite the only known in the only known in this plant in the engineering is cally separated the facilities in the control of the	Lyubertsy I miles (nr. d propella: fic Researd foorted in the Lyst and prototype devoted &D Facility R&D wonte, the twenthe USSI

25X1

25X1

BASIC DESCRIPTION

10. Moscow Explosives Propellants R&D Facility Lyubertsy covers approximately 60 acres and consists of 45 major structures, providing 52,246.3 square meters (562,170 square feet) of floorspace (Figures 2 and 3 and Table 1). The facility can be divided into two main areas: an engineering and laboratory area and a possible double-base propellant production and test area.

Engineering and Laboratory Area

11. The functional distribution of floorspace of the engineering and laboratory area and a photographic comparison with the Central Design Bureau for Space and Intercontinental Rockets, Moscow Missile and Space Development Center Kaliningrad 88 suggest a design and development role for the facility. Table 2 shows the floorspace distribution for structures in the area.

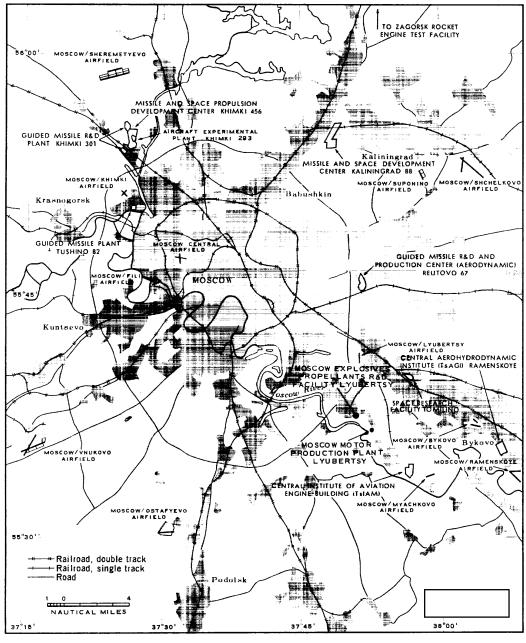
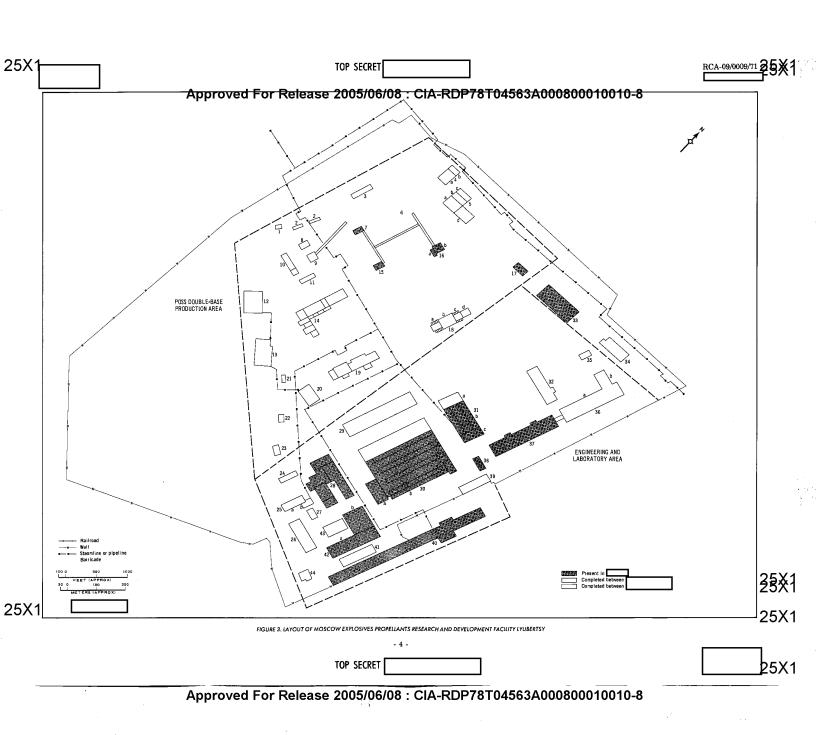


FIGURE 1. LOCATION OF MOSCOW EXPLOSIVES PROPELLANTS RESEARCH AND DEVELOPMENT FACILITY LYUBERTSY, USSR

25X1 25X1

25X1



			TOP SECRET	For Release 2005/0	06/08 : CIA	-RDP78T04	563A000800010010-8 RCA-09/0009/71			25X1
	Table	1. Data on Buildings and Str	ructures at Moscow Explosive:	s Propeliants Resear	ch and Deve	lopment Facil	ity Lyubertsy			
Item	Description or Probable Function	Dimensions (meters) Length Width Height		Floorspac Square Meters) (S	e quare Feet)	Date Complete	Comments			
1 2 3 4 a b	Storage Storage (2) Storage Ingredients preparation									25X1
5 a b c d	Ingredients preparation & storage Barricade						Bldg inside barricade on first observed missing in still missing on	1 a.,		25X1 25X 1
7 8 9 10	Processing Magazine Magazine Poss double-base mixing Poss shipping						photography.	3 · · · · · · · · · · · · · · · · · · ·	•	25,11
12 13 14 a b	Poss finishing Finishing Poss rolling & extrusion						South half of bldg complete	•		25X1
15 16 a b	Processing Nitration Processing									
18 a b c d	Laboratory test						Five test bays on each side of this section. Four test bays on each side of this section.			3
19 20 21 22 23 24 25a	inert operations Support Utility Utility Utility Utility Utility Utility Utility									
26 27 28 29 30	Storage Utility Foundry Engineering Shop/assembly						Bldg was renovated by Whole bldg has been progressively renovated			25X1
a b 31 a b	Engineering Shop						Estimated three-story bldg.	,÷		25X1
32 33 34 35	Engineering Support Warehouse Warehouse Support Engineering Laboratory						Three-story section.			
36 a b 37 38	Engineering Laboratory Admin						Four-story section. Four-story walkway connects this building with item 35. Two-story section. Four-story bldg.			
39 40 41 42 a	Admin Engineering Laboratory Storage Shop						Two-story bidg. Possibly for pattern or model making.			
43 44	Storage Support									

25×1

25X1 **25**X1

*Approximate measurement.

25X1

- 5 -

TOP SECRET

25X1

25X1

25X1

25X1

Table 2. Engineering and Laboratory Area Floorspace Distribution

D			
Function	Square Meters	Square Feet	
Administration			25X1
Engineering Shop and metal working			
Shop assembly			
Other (storage, support, utility)			
Total			
	-		

12. Two-thirds of the floorspace of this area is devoted to engineering. The area contains four large multistory engineering/laboratory buildings, the largest of which 25X1 appeared to be externally complete in One large shop/assembly building (item 30), supported by a probable foundry (item 28), is probably used to produce scale-model hardware associated with the research and testing programs.

Possible Double-Base Production Area

13. The possible double-base production area is identified on the basis of a 25X1 comparison with an area of Perm Munitions and Chemical Combine K Kirov 98 The identification is weakened by the lack of nitrocellulose production in the plant. However, nitrocellulose is easily transportable and is brought in from outside sources in at least one other double-base plant (Petrokrepost Explosive and Solid Motor Plant Morozov,

- Based on the relationship and locations of the buildings in this area, it is possible to hypothesize that double-base rocket motors might be produced in the following manner. Raw materials for nitroglycerine production, such as nitric acid, sulfuric acid, and glycerin, are supplied from other plants and stored and prepared for use in the ingredients preparation buildings (items 4 and 5). After the nitration process (items 7, 15, and 16), nitroglycerine is mixed with nitrocellulose in the possible double-base mixing building
- 15. Double-base propellant then moves to the possible rolling and extrusion building (item 14), where it is extruded into grain of the proper size. Final processing of the grain and the assembling of motors is accomplished in the finishing building (item 13).
- 16. The collocation of engineering space and at least 18 small test bays indicates that item 18 serves as a laboratory test building. Motors of the very small size believed to be produced at this facility could be tested in this building. A motor too large to be tested in the laboratory test building could be tested at the nearby Moscow Solid Motor Production Plant Lyubertsy, which has three test cells.

Chronology

This facility has approximately doubled in floorspace since it was first observed in The completion of the new engineering building (item 29) by represents an increase of over 40 percent in the available engineering floorspace. The 25X1 completion between 1964 and 1968 of buildings believed to be associated with double-base propellant and rocket motor production and the close association with the solid motor production plant suggest that the major effort at the facility is in the rocket motor field. Estimated dates of completion for each building are given in Table 1.

Essential Services and Security

18. A single rail spur enters the facility in the northeastern section and serves four buildings along the northern wall of the plant. Heat and power are supplied from Moscow Heat and Power Plant, Lyubertsy TETS-22 . A security wall completely 25X1 circumscribes the facility.

		D. H. H. H. H. M. C. L.		
		REFERENCES		
MAPS OR CHARTS	,			
		e 1:200,000 (SECRET)		
	oo, sheet 0107-5, scar	e 1:200,000 (SECRET)		
DOCUMENTS				
1. NSA, Munitions/Prop	"Ider Sellants Research Facility	ntification of Scientific Res. y (TOP SECRET COD	earch Institute #125, Lyube EWORD	ertsy, As a Possible
only) 2. NPIC. R <u>CA-(</u>	09/0025/69,	Moscow Solid Prob	ellant R&D Facility Lyubert	Feb 60 (TOD
SECRET 3. NPIC. RCA-				
SECRET		Moscow Solid Motor	Production Plant, Lyubert	sy, Aug 70 (TOP
4. NPIC. RCA- Apr 70 (TOP)	-09/0026/70, SECRET	Moscow Missile	and Space Development Cer	nter Kaliningrad 88,
REQUIREMENT				